

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figs. 1-3. This sheet (sheet 1/6), which includes Figs. 1-3, replaces the original sheet including Figs. 1-3.

REMARKS/ARGUMENTS

Claims 1-11 stand rejected in the outstanding Official Action. Claims 1 and 2 have been amended and newly written claims 14-24 offered for consideration. Therefore, claims 1-11 and 14-24 remain in this application.

The Examiner's initialing and dating the prior art previously submitted in Applicants' Information Disclosure Statement is very much appreciated. However, Applicants would also request that the Examiner confirm receipt of not only Applicants' claim for foreign priority, but also constructive receipt of the certified copies of the priority documents from WIPO. It is noted that this is a PCT national stage application (as noted in the filing receipt and in the "Notice of Acceptance of Application" mailed December 27, 2005). Confirmation of the priority claim and at least constructive receipt of the certified copies of the priority documents is normally acknowledged by the Examiner filing out the Office Action Summary Sheet and marking boxes "12," "a)" and "3." The Examiner is respectfully requested to include such an acknowledgment in any response to this Amendment.

Claims 1-11 stand rejected under 35 USC §112 (first paragraph) as failing to comply with the written description requirement. This rejection is respectfully traversed. As discussed throughout Applicants' specification and as shown in Figures 4-17, each of the flexible beams has an end shaped to provide a supporting surface for passively supporting the deformable mirror. There is no requirement in 35 USC §112 for the term "passively" to be present *in haec verba* in the specification as originally filed. This "passively" aspect of each beam can be seen in the figures and is readily apparent when reading the specification. However, as this feature is

not needed for defining over the prior art, the term “passively” has been removed from claim 1, thereby obviating any further objection.

Claims 1-11 stand rejected under 35 USC §112 (second paragraph) as being indefinite. As the Examiner notes, the use of the term “a deformable mirror” in claims 1 and 2 after line 2’s recitation of “a deformable mirror” is alleged to be indefinite. Applicants have amended claims 1 and 2 to refer to “said deformable mirror” clearly indicating a reference to the deformable mirror recited in line 2 of claim 1. In view of this amendment, there is believed no further basis for rejection of claims 1-11 under 35 USC §112 (second paragraph) and any further rejection thereunder is respectfully traversed.

Claims 1, 3-6 and 9 stand rejected under 35 USC §102(b) as being anticipated by Merz (U.S. Patent 6,307,688). Applicants have amended independent claim 1 (and included in newly written claim 14) to recite the feature of the flexible beams being flexible so as to permit “pivotable out of plane flexing of an edge of said deformable mirror.” This pivotal flexing is clearly shown when comparing Figures 5 and 6 of Applicants’ specification, especially if the deformed mirror in Figure 6 is compared with the prior art deformed mirror shown in Figure 3.

Because this structure is now positively recited in independent claim 1, in order to maintain the anticipation rejection, it is incumbent upon the Examiner to identify where in the Merz reference there is any such teaching. In fact, there is no such teaching in Merz, because Merz does not relate to a deformable mirror and instead is an optical lens. The Merz device provides sideways pressure on the lens “in order to generate tensile and/or compressive forces” (abstract). There is no disclosure in Merz that the alleged “flexible beams (3, 4, 5)” have any flexible characteristic, let alone pivotally flexible as required by Applicants’ claims.

Additionally, it is noted that the lens in Merz would not have any pivotal flexing of the edges, and indeed the only point of the Merz reference is to apply tensile and/or compressive forces to the edges of the lens, which is not a force tending to pivot the edge of the lens.

Because Merz fails to disclose the subject matter of Applicants' independent claims 1 and 14, there is no basis for further rejection under 35 USC §102 and any further rejection thereunder is respectfully traversed.

Claims 1-6 and 9-11 stand rejected under 35 USC §102(e) as being anticipated by Gaber (U.S. Patent 6,388,823). Gaber, like Merz, teaches the application of forces to a lens, but contains no disclosure of any supporting beams having pivotal flexibility with respect to the edge of the lens. Indeed, it is noted that, while deformable mirrors do have edge pivoting and thus, as discussed in Applicants' specification, need a pivotally flexible beam, there would be no reason for one to attempt to make any beam disclosed in Gaber pivotally flexible, because during operation, there is no pivotal flexing of the edge of the Gaber lens 1.

Accordingly, like Merz, Gaber simply does not disclose the subject matter of Applicants' amended independent claim 1 or newly written claim 14 (when this "means" claim is properly construed to cover the disclosed embodiments and examples in the specification) and therefore there is no basis for rejecting these claims or claims dependent thereon and any further rejection under §102 over Gaber is respectfully traversed.

Claims 7 and 8 stand rejected under 35 USC §103 as unpatentable over Merz or Gaber. In view of the fact that claims 7 and 8 ultimately depend from claim 1, the above comments distinguishing claim 1 from the Merz and Gaber references are herein incorporated by reference. Moreover, it is noted that because neither Merz or Gaber are concerned with pivotal flexibility, it

would not be obvious to one of ordinary skill in the art to modify the beams in Merz and Gaber to permit Applicants' required pivotal flexibility. Therefore, any further rejection of claims 7 and 8 as obvious over Merz or Gaber is respectfully traversed.

Claims 10 and 11 stand rejected under 35 USC §103 as unpatentable over Merz. Inasmuch as claims 10 and 11 depend from independent claim 1, the above comments distinguishing claim 1 from the Merz reference are herein incorporated by reference. Inasmuch as claims 10 and 11 depend from allowable claim 1, they are not believed obvious in view of the Merz reference and any further rejection thereunder is respectfully traversed.

The Examiner objects to claim 9 as being of improper dependent form. Claim 9 recites a combination of "a deformable mirror and a deformable-mirror holder as recited in claim 1." Accordingly, while claim 1 is limited only to the claimed "deformable-mirror holder," claim 9 recites two elements: the "deformable mirror" and the "deformable mirror holder." It is noted that while claim 1 discusses "a deformable mirror," it does not claim the deformable mirror and, as such, does not require the deformable mirror to be present in a product in order to infringe claim 1. Claim 9 does require a deformable mirror in order to be infringed.

Accordingly, claim 9 further limits claim 1 by requiring a deformable mirror. The Examiner confuses the reference to the claimed interrelationship with a deformable mirror in claim 1 as being a positive recitation of a deformable mirror. Applicants' "holder" is partially defined by its cooperation with a deformable mirror, but the deformable mirror itself has not been required. Accordingly, any further objection to claim 9 under Rule 75(c) is respectfully traversed.

The Patent Office objects to the drawings. It is also appreciated that the Examiner has brought the drawings to the applicant's attention. It is noted that the objection to the drawings appears to be an indication that the originally filed specification and drawings (transmitted from WIPO) do not meet the formality requirements of the U.S. Patent and Trademark Office. The Patent Office is reminded that the U.S. Patent and Trademark Office must comply with all articles of the Patent Cooperation Treaty (PCT) including Article 27. It has been held that:

"if the rule and interpretation of the PTO conflicts with the PCT, it runs afoul of Article 27 of the PCT which provides in part:

- (1) No national law shall require compliance with requirements relating to the form or contents of the international application different from or additional to those which are provided for in this Treaty and the Regulations." Caterpillar Tractor v. Commissioner, 231 USPQ 590, 591 (EDVA 1986).

The Patent Office has referenced this decision in the Official Gazette dated September 9, 1986 (1070 TMOG 5).

As a consequence, the Patent Office may not require drawing corrections (including changes in paper size, margins, etc.) as long as the originally submitted documents comply with the PCT requirements. Inasmuch as this specification and these drawings were forwarded for WIPO, by definition, they meet the PCT requirements (they are not forwarded until they meet PCT requirements.). Therefore, the objection to the drawings is respectfully traversed and reconsideration thereof is respectfully requested.

Applicants enclose herewith revised formal drawings with a replacement sheet clearly designating Figures 1-3 as "prior art."

GRIFFITH et al.
Appl. No. 10/538,120
February 20, 2008

Applicants have also introduced newly written claims 14-24 which generally correspond to claims 1-11, but in narrower means-plus-function format with respect to the flexible beam. In accordance with the 6th paragraph of §112, it is incumbent upon the Examiner to construe claim 14 to cover the various examples and embodiments of Applicants' invention which are disclosed in the figures and discussed in Applicants' specification. Entry and consideration of newly written claims 14-24 is respectfully requested.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-11 and 14-24 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By:

Stanley C. Spooner
Reg. No. 27,393

SCS:kmm
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100